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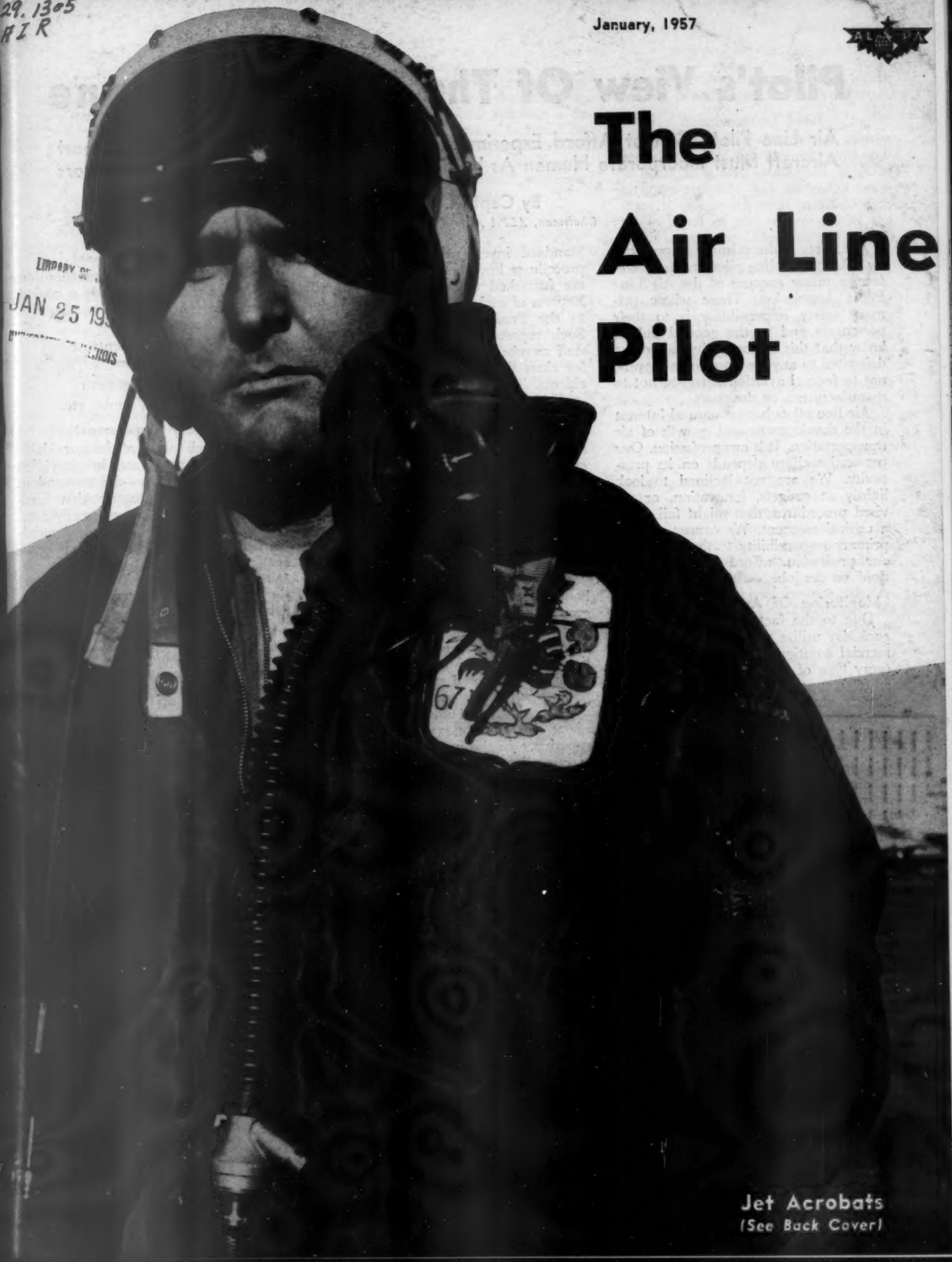
The Air Line Pilot



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Jet Acrobats
(See Back Cover)

Pilot's View Of The Transport Plane

Air Line Pilots Cannot Afford Experimentation On The Job. Therefore Transport Aircraft Must Incorporate Human As Well As Technical Operational Safety Factors

By Capt. R. F. Adickes

Chairman, ALPA Aircraft Evaluation Committee

Air safety is the primary responsibility of every air line pilot and is, therefore, a prime concern of the Air Line Pilots Association. Those whose primary safety responsibility is to their passengers and to the general public, know that this responsibility cannot be delegated to anyone—not to employers, not to federal aviation agencies, not to manufacturers, or designers.

Air line pilots have a natural interest in the development and growth of air transportation. It is our profession. Our personal welfare depends on its prosperity. We are not inclined to look lightly at gadgets, innovation, or revised procedures, that might fail us at a critical moment. We cannot, in our primary responsibility to the public, or our profession, afford "experimentation" on the job.

Monitoring Of Aviation Facilities

Due to the fact that air line pilots *each day* utilize practically every commercial aviation facility in the world, every type of commercial aircraft, aircraft component, radio, commercial airport, etc., pilots provide a means for continuous monitoring of all aviation facilities. We conceive one of the primary safety functions of the air line pilot to be the discovery and reporting of air safety problems. Anything that interrupts or interferes with the free flow of this information in itself constitutes a hazard.

Accident Investigation

ALPA participates in the investigation of all major air carrier accidents. Standard investigation and reporting procedures have been worked out and are furnished to pilot representatives. Reports of each investigation are made to the President of the Association. Such reports are analyzed by ALPA staff members and pilot representatives for clues that may prevent future accidents. The practice of reporting the probable cause of the accident has been instituted. In this regard, it should be noted that ALPA readily admits that there are "pilot error" accidents. However, it holds that no pilot ever erred deliberately or in the interest of self-destruction. ALPA is interested in the reason behind the error and feels that any accident written off as "pilot error" has not been adequately investigated. For example, did the error originate in design error, fatigue limits, cockpit booby traps, inadequate training program, some other area? ALPA feels that this viewpoint must be strongly represented at all accident investigations if the operational aspect is to be thoroughly explored and the maximum learned from each accident.

The professional air line pilots represent the greatest reservoir of flying experience in the world. The majority of our pilots have flown more than a million miles—they represent a cross-section of education, with many graduate engineers, doctors, and lawyers in our ranks. From this wealth of talent and experiences this paper is derived. Our complete resources are available to the aviation industry—without obligation.

Cockpit Environment

One of the most direct contributions ALPA can make is to study a cockpit layout and functional design. Some of the specific areas are:

- Visibility requirements
- Controls
- Instrument arrangement
- Switches, levers, knobs, etc.

Visibility Requirements

We are well aware of the formidable problem designers face in providing visibility to the pilot—the tremendous forces imposed by pressurization, bird-proofing, and other factors greatly complicate this problem—but our requirements must be recognized. It is axiomatic that the pilot experience obtained behind these windshields, coordinating with the design engineers, can furnish the best criteria.

Controls

The feel, location, movement, and response of the controls are quickly assessed as satisfactory or unsatisfactory by the experienced air line pilot. The transition between airplane types by the individual pilot requires a basic similarity of controls, the lack of which may contribute to accidents. Pilot participation in design studies have resulted in the removal of control locks in several jet transports—thus eliminating, by the records, an obvious hazard.

Instrumentation

Instrumentation in the cockpit is an area of great interest to us. The air line

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pilots' vast experience in observing the behavior of flight instruments in good and in foul weather at least every other day on their scheduled trips for over 20 years has placed them in an extraordinarily advantageous position to promulgate a philosophy of flight instruments' arrangement. This step has been made necessary by the increased speed and complexity of jet aircraft operations and the development of new ways to secure more efficient use of the information portrayed on the new integrated type flight instruments. A flight instrument arrangement standard is only good for the period for which it is applicable. If extended beyond it will stifle development, and make the art of instrument flying more difficult and unsafe.

Our philosophy—primarily, maintain a moving position in space *by attitude control* and secondarily, guide this moving position directionally. We are first interested in keeping her airborne and secondly in the right direction.

Therefore, the airplane attitude instrument (artificial horizon types) becomes the prime instrument and shall be located in the center of the top row directly in front of the pilot. Supporting or reference instruments such as the combination instrument which includes indicated airspeed, mach meter, and angle of attack information and the altimeter shall be located to the altitude instrument's left and right respectively.

The other basic but secondary instrument, the navigational situation display type with circumferencial integral compass card, shall be located directly below the artificial horizon type instrument. Navigational reference or assist instruments shall be located to its left and right.

The basic "T" formation of flight instruments cannot be compromised. Our flight instrument arrangement has received a 98 per cent favorable vote from the Air Line Pilots Association membership. In addition, our flight instrument arrangement is practically identical to that prescribed by the U. S. Air Force (W.A.D.C.), the U. S. Navy (Hoover Report), and by specification for our new jet transport aircraft.

Switches, Levers, And Knobs

Early in our studies of the jet transports, the myth of "less complex" operation was exploded. We soon realized air line pilots are entering a new era with the most demanding and unforgiving airplanes we have yet known. The split-second timing requires careful placement of every switch and lever. Every control must be evaluated by currently qualified pilots with an intimate, day-to-day knowledge of the operation for which the airplane is designed. The placement of essential devices in the cockpit should be decided by the current users, and not by personnel "swivel-chair based" since the DC-2 and the flying boat.

We have data on one particular type of medium weight transport airplane with more than eight landing accidents attributed to "pilot error" . . . wherein the landing gear (rather than flaps) was retracted upon landing. Another almost identical airplane has enjoyed wider use and has never had an accident of this type. Are the pilots of the latter airplane more proficient, or is there a design fault in the gear and flap controls of the first plane? It is a very simple study to compare the position and relative motion of the controls between the two, and the answer to the accidents is immediate and obvious. Have the designers of our "accident prone" airplane disavowed their product? Why does this obvious design error continue to fly? Pilots have been unsuccessful in persuading the necessary modification, and sometimes we feel designers, too soon forget their product.

Fire Emergency Procedures

The National Advisory Committee for Aeronautics has developed a new approach to fire prevention after a survivable crash of a jet airplane. By the immediate application of water, the hot areas within the engine are cooled to a point below the ignition of the fuel. This *NACA* water inerting has been proven by theory and demonstration in several types of jet and reciprocating engines. The ALPA has made a thorough study of this novel device, and we unqualifiedly endorse "water inerting" in principle. It is now the problem of engine manufacturers to develop its application to their product. This product has proceeded slowly, with only a fraction of the effort the jet "sound suppressor" has enjoyed. It is oft times discouraging to the pilots to see millions spent to placate some highly vocal political minority, and at the same time observe the snail's pace of a potential life saving device. We believe water inerting should receive priority consideration over noise suppression.

Most Americans will soon be jet transport passengers, and it behooves us all to support any plan increasing the possibility of surviving a jet accident. If we can eliminate the source of fire, our chances of *survival are materially increased*. We can physically tolerate fantastic deceleration loads, but we cannot design a fireproof man.

Economics of Safety

The fact that accidents cost money, and that safety and economy go hand-in-hand is a well-established basis of airline operation. Yet, on many occasions it is ignored with eventual dramatic proof of the correctness of the original premise. One airline had a fleet of high speed four-engine transports, not equipped with reversing propellers. Every blandishment and persuasion by the pilots to equip these planes with reversible propellers was of no avail. By 1954 five airplanes had been substantially destroyed in landing runout accidents, with a direct loss of more than 6 million dollars. The fleet could have been converted to reversing propellers for less than 1½ million The propellers with the reverse thrust feature requested eight years previously, and after the severe losses have been taken, will be installed next year.

Performance

On performance requirements for transport aircraft, we believe that the designers and flight test methods have really drained the last drop of blood out of the CAR performance requirements. Flight test data obtained for compliance with Civil Air Regulations is obtained under ideal conditions which are really the exception rather than the rule in air line flying. Our take-off safety record has been good *only because of engine reliability* rather than an adequate safety margin in our performance requirements during adverse operating conditions.

Another factor which the industry *should* take into consideration that has an important bearing on performance requirements is the fact that our airports are becoming one of the greatest bottlenecks in *expediting landings* to increase air traffic movements. We point out short runways at many of our major airports cause ATC tie-ups. Usually before we clearly identify the runway, to safely make the final landing decision, too much of the runway is flown over to continue the landing—so a missed approach or balked landing results, necessitating the highly undesirable hazard of a "pull-out" followed by ATC difficulties. We firmly believe for take-off safety and completing landing schedules, the designers and operators should evaluate a transport airplane (present and future) more realistically to meet the *most adverse* operating conditions. Such an evaluation we firmly believe would result in longer runway requirements.

For take-off safety with an engine inoperative at V_1 we believe a requirement for a 50′ minimum height over the runway end regardless of the weather conditions would do much to provide the long runways required and the realistic airport area needed to expedite airplane movements both on take-off and landing. From data on hand to date, it is known that approximately 10 per cent more runway length than now required would provide the 50′ height and would contribute *greatly* toward increasing the safety and efficiency of operations. For many years the air line pilots have sought the aid of the industry to place into effect realistic *take-off* performance requirements which would also help make safe *landings* under reduced visibility conditions. Long runways are the best means for assuring completing schedules with safety. Since the aviation industry has matured, we feel certain that with the proper cooperation from all qualified segments of the aviation industry, we can increase take-off and landing safety and also improve air traffic control immeasurably by getting behind a move to extend runways to realistic lengths.

Stepped Climb

It is difficult to conceive the conception and design of new airplanes built in 1956 and 1957, planned for trans-Atlantic service, being incapable of climbing above 10 or 12 thousand feet for several hours after take-off. It is apparent to the pilots currently flying the highly congested North Atlantic route, that this "stepped climb" performance is incompatible with traffic problems. Within this area we must establish a better exchange of operating information.

Emergency Problem Areas

Emergency equipment and procedures. Without doubt the pilot is in a position to evaluate good emergency equipment and procedures. By the record some very hazardous emergency equipment locations and operating procedures have existed and still do. To name a few, we have reference to the following: (1) Life raft location and launching, (2) Flotation means for each occupant, (3) Greater knowledge of dangerous conditions.

Life Raft Location has been grossly neglected. Heavy clumsy rafts are located in inaccessible areas, requiring, once they are reached, carrying them a considerable distance through a narrow cabin aisle to an opening for launching. The pilots have long pointed up deficiencies in life raft location.

The new transports promise greater ease of raft launching in a shorter time. Highly lacking in past designs and only now receiving attention is location of rafts above the floor near the exits, a location which practically makes possible launching a raft without carrying this clumsy heavy piece of equipment. Locating a raft near the ceiling or overhead rack at the emergency exits simplifies launching a raft to virtually letting it drop at the exit and giving it a shove.

Flotation means for each occupant for the "unplanned" ditching type accident has been sorely neglected. Over the past 10 years (1946-1956) there have been nine off-shore ditchings of U. S. airline aircraft in which several lives were lost due to drowning—and several were saved because the seat cushions happened to be the type that provided flotation. In each case, no water survival equipment was available inasmuch as over-water flight either was minimal or not routine. Since 1952, as a result of an "unplanned" off-shore ditching accident accompanied by a large loss of life, ALPA safety representatives have repeatedly pressed the industry for emergency flotation equipment for each occupant in the airplane regardless as to whether the airplane operated over land or water routes. ALPA representatives have pointed out *repeatedly* that a head pillow or seat cushions, standard equipment on all passenger airlines, would make suitable emergency type life preservers, with slight inexpensive modifications.

Several "unplanned" ditchings have occurred since 1952 and will no doubt continue to occur. Lives already have been lost, but the following is the testimony of one person that was saved by two small pillows: "Barbara said to grab the pillows and a little white one floated by at that time. By that time, we were in the water and Barbara gave me another foam cushion." The person who made the above quoted statement was found floating with the pillows under her arms when rescued. Every passenger airliner carries small head pillows that can be used as an emergency life preserver means—yet very little effort has been made to make this fact known. It is possible that today, many years after this matter was first called to the aviation industry's attention, that we can still drown a load of passengers with flotation means (seat cushions or pillows) for each occupant on board.

Recently an "unplanned" ditching accident occurred. The crew members tore the airplane's seat cushions from their fastenings and gave them to the passengers as they evacuated the sinking airplane. Thirty-four of the thirty-eight persons were found floating by these seat cushions when rescued. Had not the flight crew had the initiative to think of the seat cushions as emergency flotation means for each occupant, in all likelihood all thirty-eight persons would have drowned, even though flotation means for each occupant was on board.

A young mother and her son owe their survival to just such a seat cushion. She stated: "I tossed my small four-year old son through the emergency exit to the plane's wing and then I crawled through. The wing began to sink so we crawled up onto the cabin. We were there about two minutes when it went down. I watched the tail come up and the plane nose over and sink. I was worried about being pulled down with it, but there did not seem to be any suction. My son and I were on a floating cushion." P.S. And what about the four-year old's immediate reaction to the emergency? The young mother explained it this way, "As soon as he got into the water, he said, 'Mommy, I gotta go potty.'" She told him he could do anything he wanted!

Although emergency flotation equipment is acknowledged as desirable by the industry, approximately 400 new airliners since 1952 have been delivered apparently without any attempt being made in the upholstery shops of the manufacturer, or the carriers to make the minor inexpensive revisions necessary to provide each occupant of the airplane with a means to prevent being drowned after having survived the accident without injury. Even with the knowledge that the modifications on presently flying airliners can be made practically without penalty in weight, it is not being done. The new jet airliners on order *may* have some means of emergency flotation equipment for each occupant. We think we are making progress, but maybe a Civil Air Regulation, over four years too late, may be needed to accomplish the desired result, including a retrofit proviso. We as pilots believe that too often we *finally* learn the hard way to implement *obvious* safety measures, and we point out this item as a typical example.

Dangerous conditions that can be encountered with the mis-use of controls, cowl flaps, etc., should be fully explored and all the pilots flying each particular model transport should be made to thoroughly understand all information obtained either by schooling or through actual demonstrations. Recently a large airliner was ditched due to violent shaking and buffeting

(Continued on Page 21)

. . . Since Six Years After The Wrights

When Captain Charles W. Meyers of 2418 Country Club Prado, Coral Gables, stepped from the cockpit of Eastern Air Lines' Golden Falcon flight 705 from Detroit on its 8:45 p.m. arrival at Miami's International Airport Thursday, Nov. 29, he closed the log book on a career of flying that got its spark back in 1909, just six years after the Wright Brothers flew at Kill Devil Hill.

After 25 years and millions of miles at the controls of EAL airliners Capt. Meyers had retired at the age of 60.

Native Iowan

A native of Columbus Junction, Iowa, the veteran captain first became interested in flying 47 years ago when as a youth he was an enthusiastic member of a model airplane club. At the time he was living with his parents at Glen Ridge, New Jersey.

By the time he was 17, Charlie was building his own gliders and flying them off the hills of the Glen Ridge golf course.

In 1915, he got a job as a mechanic with Aero Marine Plane and Motor Company, Key Port, New Jersey. At the time, the company was building sea planes for the Navy. Every spare moment, on and off the job, was spent with airplanes wherever he could find them.

Soloed In 1916

Charlie got his first opportunity at powered flight when a friend on Long Island acquired a Curtiss pusher and offered to let him learn to take it off the ground. He grabbed the opportunity with both hands and in 1916 soloed the pusher, taking off from a patch of ground that later was developed into Roosevelt Field.

That same year, Charlie went to Canada to attend the University of Toronto. While there, the gathering war clouds prompted him to join the Royal Flying Corps, the original outfit that later became the Royal Air Force. The latter part of 1917 he was transferred to England where he served two years on Sopwith Camels, a single seated fighter.

After the war Charlie returned to the United States and went on a barnstorming tour around the country, passenger hopping from town to town and exhibition and stunt flying at county fairs. While barnstorming he joined the U. S. Air Force reserves, remaining in the reserves for 17 years.

Joins Aircraft Company

In 1924, after five years of barnstorming, Charlie joined the Waco Aircraft Company, Troy, Ohio, as design engineer and test pilot. While with the company he designed and test flew the Waco 10 and the Waco Taper Wing. In off-duty hours he designed and built a single seat racing plane, the Meyers Midget, in his backyard. He raced the Midget in a number of national air races. In 1927, at the controls of a Waco 10, Charlie won the transcontinental air race from New York to Spokane, Washington.

He left Waco in 1928 to join the Great Lakes Aircraft Company in Cleveland. He designed the Great Lakes Trainer, and was test pilot on a torpedo bomber the Company was building for the Navy.

On November 9, 1931, Charlie became a pilot for Eastern Air Lines and settled down to commercial flying for a quarter century. Almost immediately, he joined ALPA, becoming a member in February 1932. He holds membership No. 429.

Flies The Mail

His first flight was in an open cockpit Mailwing flying a load of mail from Atlanta to Richmond. It took nearly all night, he recalls, for the 482 mile flight. At the time Eastern also operated Kingbird and Condor passenger planes. Charlie flew all of them, flying the mail planes some days, the passenger planes on others.

Capt. Meyers on last flight with son-in-law Capt. Byers

In the 25 years, he has been with Eastern, Charlie has flown every type of plane the Company has operated right through the Golden Falcons. And he has flown every route on Eastern's 25 state system, logging over 5 million miles in the process.

Charlie and his wife, Jessie, were married in 1922. They have two daughters, Marion, wife of EAL Capt. William E. Byers of Miami, and Barbara, wife of Capt. Henry B. McKinney, U. S. Air Force, Memphis.

On his last flight 740-28 Miami-Detroit and 705-29 Detroit-Miami, Captain Meyers was accompanied in the cockpit by his son-in-law Capt. Byers. Capt. Meyers accompanied Capt. Byers on Byers' first flight with EAL, when the latter joined Eastern in 1946.

Changes In ALPA's Structure

Important Changes Have Been Made In ALPA's Organizational Structure To Provide Greater Representing Continuity And Effectiveness—A 14th Convention Report

By Capt. Roy Dooley, AA

Chairman, ALPA Organizational Structure Study Committee

The Air Line Pilots Association is not, and fundamentally cannot be, a static organization. Its history has essentially been one of adherence to basic and guiding principles of proper and democratic representation with necessary alterations in its structure and administrative procedures to keep apace of the times without sacrificing those principles.

In 1951, ALPA was completely reorganized to provide a far more effective and workable structure than the Association had known previously. There have been only minor changes in that structure since that time.

Studies Outlined

ALPA is a representing organization. The rules of organization, procedure and conduct that insure the continued democratic operation of the Association are found in the Constitution and By-Laws.

The basic structure of ALPA is set forth in the Constitution and By-Laws. Any study would have to start from that point. It is impossible to isolate any one section of the By-Laws and study it to the exclusion of the rest of the By-Laws. Since the By-Laws provide for the "Home Office" feature of our organization, we had to study the operation of the Home Office in order to determine the effectiveness of that feature of the By-Laws. In order to judge the adequacy of other parts of the By-Laws, we had to observe how problems were handled under the By-Laws in force, and how any change in the By-Laws would effect the handling of the same problem in the future.

Since it is impossible to isolate any one procedure, any one section of the By-Laws, any one office, or any one phase of Association activity without considering the mitigating facts, the Committee studied the entire Association.

Some of the areas their study and research covered, are:

- A review of the operation and problems of the Departments that collectively make up ALPA's representing team.
- A review of the theory and the actual operation of the Local Councils and the Master Executive Councils.
- A review of the duties and responsibilities of ALPA's officers at the Local, Regional and National levels.
- A review of the theory and operation of the Board of Directors.
- A review of the theory and need for the Executive Board.
- A review of the theory, operation and effectiveness of the Executive Committee.
- Interviews with the officers and staff and a check on their administration of the Association.
- A check on the financial operation of the Association from the Local Council through all departments.
- A review of the labor practices followed by ALPA with regard to its own employees, ALPA's labor problems with other crafts and classes, and the relationship between ALPA and other national labor groups.
- A review of the judicial procedures within the Association to insure that democratic processes are available for each and every member.
- A review of the Constitution and By-Laws to seek out changes necessary to strengthen the Association and to insure its continued democratic operation.

Membership Requirements

The Committee was aware that the Constitution and By-Laws must stand the test of time. They have to function for the benefit of the membership, not for the benefit of any one person, group, or faction. They must be changed, from time to time, but only after it has been proven that the change is necessary and in the best interests of the membership. The By-Laws must be kept up to date and flexible enough to handle the problems that come up in an industry that is moving forward as rapidly as ours.

On the basis of the study, the Committee found ALPA's structure to be generally sound. Specific recommendations were advanced for those areas where changes should be made or where strengthening could be accomplished.

The Committee recommended several changes in the By-Laws. They recommended numerous removals of words and phrases that no longer serve any specific purpose. They recommended the relocation of many paragraphs and sections for a more logical arrangement and for better continuity of thought. They recommended several changes that can be classified as major changes in the structure of ALPA.

One of the most important changes recommended, and adopted, was to change the membership requirements to enable any flight deck operating crew member to be a member of ALPA with all the rights and privileges thereof. The reasons for this change will be explained by your convention representatives. Further information on this change will be available at the coming regional meetings.

Strength Of Local Council

The Committee determined that the basic strength of ALPA is found at the local council level. The effectiveness of the local officers determines whether the local council adequately represents the members of the council. The strength of the Association is directly proportional to the effectiveness of the local council officers. The chairman and senior copilot are members of the Board of Directors. The Board of Directors is the final governing body of the Association. Any weakness in the Board of Directors will be felt throughout the Association.

The constant turnover of local officers causes a weakness to be "built in" to ALPA. The Committee sent out a questionnaire asking why people refused a second term. The answers were different in most cases. The Committee recommended changes that is hoped, will remove some of these reasons for refusal to serve.

This constant turnover results in most councils having officers that are learning the ropes for 6 months and then they only have 6 more months to serve.

The MEC Level

This "newness" at the local level is then transposed to the MEC level. It has not been uncommon for an entire MEC to be new to the job. There are several instances where one MEC has reversed the decisions of a previous MEC simply because of a lack of knowledge of the thinking of the previous MEC. This type of vacillation can seriously disrupt relations between the members of an airline and their company. MEC decisions can also affect the entire ALPA membership. The Committee's recommendations should help stabilize the employer-employee relationship. These recommendations should also protect the membership from the effects of decisions based on lack of experience and knowledge rather than a reappraisal of the facts or the introduction of new facts. In other words, continuity brings stabilization.

Continuity Provided

This continuity is provided by lengthening the term of office of the local officers and staggering the local council elections. Local council officers will be elected for an 18-month term, starting with the April 1, 1957 election. To implement the new procedure, the April 1, 1957 election will be for officers of all local councils. Some councils will be electing representatives for a 6-month term and other councils will be electing officers for a 12-month term. The remaining third of the membership will be electing officers to serve the full term of 18 months. Thereafter, there will be an election of local officers for one third of the membership every 6 months. On large airlines, one third of the MEC will be elected each 6 months. On airlines having small MEC's, the continuity will be gained through the longer term in office.

Establishment Of Local Offices

The Committee recommended the establishment of local offices as quickly as possible, once the need has been proven. These offices should relieve the local officers of some of the detail work. A procedural guide for the conduct of LEC and MEC business should be available shortly.

The Committee was unable to find sufficient facts to warrant any change in the authority of or frequency of meetings of the Executive Board. We could not determine that the make-up of the Executive Board should be changed. We did not recommend any change in the size or frequency of meeting of the Board of Directors. The Committee studied the theory and operation of the Executive Committee extensively and presented its views on the effectiveness of the Executive Committee to the Convention.

About The Article

Several important changes were made in ALPA's Organizational Structure by the Fourteenth Convention. These changes were based on many months of study undertaken by the Organizational Structure Study Committee, which was established by the Board of Directors on February 1, 1956. Members of the Committee, appointed by the Executive Committee, were: S. W. Hopkins (DAL); R. L. Tuxbury (UAL); H. G. Evans (PAA); E. A. Feazel (TWA); C. E. Luther (CAP); J. G. Fickling (Piedmont); and R. E. Dooley (AA). This article, by the Chairman of the Committee, is based on the report of the Committee to the Convention delegates.

No Change For National Officers

The Committee made no recommendations to the Convention to change the jurisdiction or duties of any of the National Officers. Instead of any specific resolutions concerning the National Officers, the Committee presented their evaluation of the effectiveness of the Executive Committee as a group and the individual offices that comprise the Executive Committee.

The study of the effectiveness and the use made of various national officers in the Association showed that the results were dependent upon the type of individual holding the office. The Association has had its share of competent officials and also its share of mediocre officials. Writing or rewriting words in the officer section of the By-Laws will not insure that any particular office holder will be competent. It was the opinion of the Committee that brains or ability can not be legislated.

The Committee report stressed the need for more use of the national officers and regional vice presidents. The scope of the Association activities is expanding at a rate where the formerly relatively unused reservoir of manpower in the Association in the regional and national officers must be utilized. The report pointed out that there are no more "honorary" jobs available in ALPA. A title now means work. The membership expects it. They cannot afford a non-working officer. Too much is at stake.

The Executive Committee, as a group, has the responsibility of overseeing the management and conduct of the affairs of the Association. The Committee pointed out that if there are policies or programs that are not implemented or carried out because of neglect or intention, the blame must be placed on the members of the Executive Committee.

Hearings And Appeals

Early in 1956 the Executive Committee requested the Association's Legal Department to prepare a draft of desirable changes in those sections of the By-Laws dealing with the hearing of cases involving charges against and appeals therefrom.

The Legal Department's recommendations were forwarded to the Organizational Structure Study Committee for consideration and possible recommendations. The need for a change was obvious, once it was shown that the Executive Committee and Hearings and Appeals Committee found themselves operating as original trial bodies rather than Appellate bodies as contemplated by the Constitution and By-Laws.

The Board of Directors is basically a legislative, policy-making body. However, under previous By-Laws, it occasionally also became a judicial body. The advisability of separating judicial functions from legislative and executive functions has long been recognized. The democratic processes of our government require that legislators not also function as judges. Aside from this primary concept, the studies of the Organizational Structure Study Committee indicate that serious delays can result in hearing of membership cases by Conventions because of the two-year intervals at which the Board of Directors meets. The Board of Directors, with its normally heavy agenda, may be unable to devote the necessary time or attention to resolve such membership problems judiciously.

For these reasons, the Committee recommended the creation of a Hearings and Appeals Board.

The Hearings and Appeals Board will be empowered to make decisions that will be final and binding on the persons whose cases are being heard.

It is envisioned that such Hearings and Appeals Board will assume a place in ALPA's organization equivalent to the Supreme Court of the United States, with the relationship between the Board of Directors and the Hearings and Appeals Board similar to the relationship between Congress and the Supreme Court of the United States.

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Runway Lighting For Low Visibility

A Companion To Approach Lighting Is Runway Lighting, Currently The Weakest Link In Pilots' Low-Visibility Visual Landing Aids

By Capt. E. A. Cutrell
AA

Ever since we have had good approach lighting, it has become more and more evident that runway lighting is definitely the weakest link in the visual aids necessary for landing in lower visibilities.

Over at Newark, after the center line system with condenser discharge lights was placed in operation, pilots early commented that the approach was easy but the visibility seemed much worse on the runway.

The inadequacy of guidance by standard high intensity runway lights was emphasized at Newark during all-weather approach tests conducted by Eastern Air Lines in a DC-3. Visibilities of only a few hundred feet were flown without difficulties until after the threshold. On one landing, directional guidance was lost completely after a normal landing, with the airplane roll-out ending off the runway.

British View

Prior to the International Air Transport Association Technical Conference at Copenhagen in May, 1952, Mr. E. S. Calvert of the British Royal Aircraft establishment made the following statement in a paper entitled *Methods of Improving Visual Guidance Over The Runway When Landing In Bad Visibility:*

"When operations are continued down to meteorological visibilities of the order of about 300 yards by day and 150 yards by night, pilots complain that visual guidance over the runway is unsatisfactory. They also agree that the lack of guidance is felt most in night fog and many have described their feelings on passing from the approach to the runway lighting patterns as 'flying into a dark hole.' When improved couplings such as automatic approach come into general use, there is little doubt that attempts will be made to operate in still lower visibilities. In these conditions the transition to visual flight will take place near the threshold or even over the runway and the time available to the pilot to appreciate the visual situation, make the flare-out and correct for drift, will be very short."

Mr. Calvert prior to this paper advocated a center line of flush lights down the first portion of the runway to furnish directional guidance during flare and landing. However, the raised domes of the flush lights available, protruded above the runway level and were unacceptable operationally. His compromise at London Airport consists of stub bars of lights on frangible fittings, forming a 150 foot gauge. However, Mr. Calvert has stated that the acceptable limit for landing with this arrangement is a minimum of 500 yards runway visual range. Many pilots are of the feeling that such lighting is necessary to close and hold the center line in these lower visibilities.

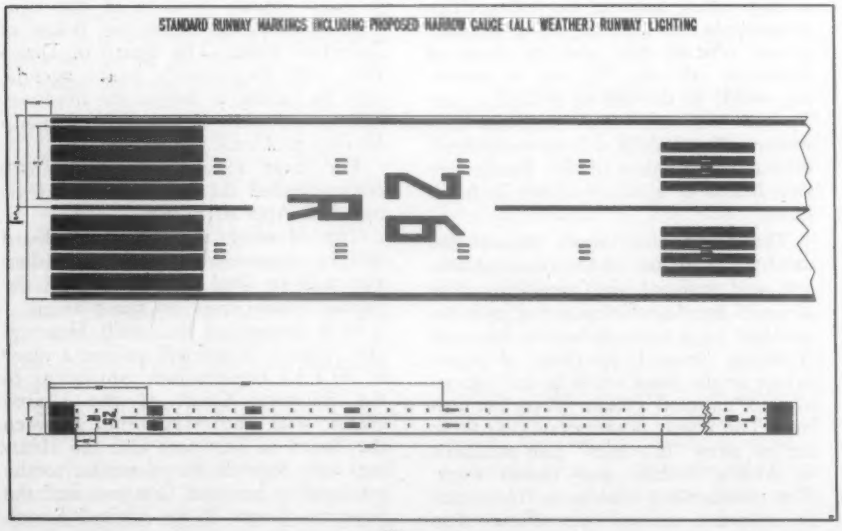

Figure 1.

IATA Conference

The report on the IATA Technical Conference at Copenhagen in May 1952 stated:

"The view was advanced that because the amount of approach light guidance diminishes rapidly under lower ceilings, an urgent need exists to extend the system along the runway to a significant point. Assuming an approach speed of 130 m.p.h., a cockpit cut-off of 12° and the ILS reference point 1000 feet down the runway, the maximum possible exposure time to approach light guidance is only 11 seconds, with transition completed at 200 feet altitude. Under reduced ceiling conditions, assuming completion of visual guidance at 150 feet, the exposure to approach light guidance is just over 6½ seconds duration. The same condition at 100 feet permits less than 2 seconds of approach light exposure. In order that pilots may carry out approaches with tranquility of spirit, it appears necessary to develop configurations which will permit the visual approach aid to be extended at least to the ILS reference point."

Jenks' Statement

In a paper prepared for the IATA Amsterdam meeting November 14-22, 1955, Art Jenks expressed this same problem as related to a three seconds cone required to maintain visual flight as follows:

"At an approach speed of 140 knots a visual segment of 3 seconds would be slightly over 700 feet. This is sufficient to be comfortable where good approach lights are underneath. On the runway with normal high intensity runway lights, at the same time a visual

segment of 6 to 9 seconds or a visual range of 1400 to 1900 feet is required to give a comparable tranquility of spirit."

The IATA Amsterdam report states in part:

"One of the elements of guidance that must be provided to meet the operational requirements for flare and landing is a visual gauge of two rows of visual indications symmetrically disposed about the center line, with their centers 75 feet apart laterally. This narrow gauge should commence at the threshold and extend along the runway for a distance of the order of 3000 feet. Possible means of meeting operational requirements and design principles of narrow visual gauge: By suitable markings and by flush lighting units at intervals, longitudinally of 100 feet, a majority of airlines felt that this flush lighting should be provided in the form suggested by A. E. Jenks." (Fig. 1.)

In reference to military requirements for visual aids to flare and landing, reference is made to the Brinkerhoff Criteria Study, dated July 1955.

Report To IFALPA

The following is quoted from the report of the IFALPA Technical (AGA) Meeting in London, May 8 to 10, 1956.

"It was agreed that with the successive lowering of aerodrome weather minima, the emphasis on lighting requirements would fall on the runway rather than on approach lights. In the past insufficient attention had been paid to runway lighting with the result that pilots were, on leaving the approach light system confronted by a 'black hole.' Progress on the problem had been slow due partly to the difficulty of installing powerful lights which did not protrude above the runway. However, reasonably powerful flush runway lights had recently been developed and thus had enabled the idea of the 'landing mat' to take shape. In developing that idea Mr. A. E. Jenks of the CAA had taken a leading role. The meeting considered his proposals for a narrow gauge runway lighting system and the various modifications to the system which had been proposed. The meeting was in agreement that a runway lighting system of approximately 75 feet gauge was highly desirable and that its value justified immediate installation at certain runways at present under construction. For such runways it was recommended that the full Jenks pattern should be installed (lights every 100 feet)."

We have pieced together here the statements and conclusions of pilots, operational and technical groups, all of the opinion that visual lighting aids are a requirement on the runway proper. Also the conclusion generally that the implementation must consist of flush lights to meet this requirement.

We urge that a cooperative effort be made to complete such a narrow gauge installation at the earliest time possible for further evaluation and standardization.

FLYER'S FORUM

Look Out! There May Be A Plane Piggy-Back!

Until We Obtain More IFR Control, The Author Suggests Way To Live With VFR

By Capt. R. L. Weigle
Council 50, AAL

Do you ever think back about your early days of flying and note the changes in technique that have evolved since then? If you happened to have been a flight instructor, there is one rule that you will undoubtedly remember drilling thoroughly into every one of your students—*always clear yourself before starting a maneuver of any kind.*

Before entering a dive or spin, we always made a series of steep "S" turns to make sure there was nothing beneath us. When climbing or descending, we continually made turns to the left and right to check for other traffic —all this when the density of air traffic was practically nothing compared with today's.

This basic safety technique has long since been abandoned by the airlines. Now, when we want to climb, we simply start climbing—straight ahead; when we want to descend, we simply start descending—straight ahead. Why? Well, certainly the fewer turns we make the better, so far as passenger comfort is concerned; then too, turning wastes time—slows schedules; and finally, I think we have somehow gotten *the mistaken idea that the improved cockpit visibility of modern airliners makes turning unnecessary.* This last is the point on which I would like to dwell.

Collision Factor

I may be wrong, but it seems to me that the majority of mid-air collisions lately, including the tragic Grand Canyon crash, have involved planes that were flying, not toward each other, but rather in approximately the *same direction.* This would appear to have some significance. I think it means that, even with the very fast closing speeds of modern planes, we are *seeing* the aircraft approaching us head-on in time to avoid a collision. The ones we are evidently *not seeing* are those planes flying parallel to our own flight path.

It is true we have pretty good visibility from the up-to-date cockpit—if we were driving our planes on the nation's highways, that is. Unfortunately, we have another dimension to contend with—the vertical. This is an inherent weakness in the see and be seen technique of VFR flying, and, though it may not be readily apparent, it seems to me that we are all sitting on a virtual powder keg that might blow up for any one of us when we least expect it. A pilot cannot see through the roof of the cockpit, nor can he see through the floor. Thus, it is possible for one plane to be directly above another in such a position wherein neither crew can possibly see the other ship.

This condition would be most likely to occur between two aircraft of approximately the same speed, or when the higher plane is faster. Let's take an example:

Cites Example

A DC-7 is flying at 21,000 feet, while slightly ahead and directly under its nose a Super-Constellation is cruising at 19,000 feet. The DC-7 crew cannot possibly see the Connie because it is hidden by the nose of the DC-7. Now, the crew on the Connie is similarly handicapped. Since their plane is below and *directly* ahead of the DC-7, the only way they could possibly see it would be through a sky light on the rear of the cockpit ceiling. Of

course, a Connie doesn't have a skylight. Therefore, with two planes in approximately this position, it is virtually impossible for either crew to see the other craft.

Now, let's assume the Connie decides to change altitudes and climb VFR to 21,000 feet. As he starts up, his speed begins to drop off so that, although he was a mile or so ahead of the DC-7 at 19,000, he gradually drops back as he approaches 21,000. During this climb, the *relative angle* between the two planes remains the same, so that it is still impossible for either one to see the other. With just the right speed change and no variations of heading, it is very possible for the lower plane to climb right up into the higher one with no chance of either one seeing the other. It is not a question of lack of vigilance on the part of the pilots; it is strictly a case of inherent blind spots in the aircraft. Is this what happened over the Grand Canyon? We may never know. But one thing we do know—under the right conditions, a collision of this kind is certainly possible.

'Russian Roulette'

In my opinion, the only thing that keeps accidents like this from happening frequently, is the fact that very seldom do two planes happen to line up at just the right angle relative to each other as described above. Yes, it seldom happens, but I think it is somewhat like playing Russian roulette—the right condition might not arise for long periods of time, then suddenly we *could* have two or three mid-air disasters in one week!

What can be done to correct this danger? The best solution, in my opinion, would be an electronic proximity warning device covering the areas *directly overhead* and *directly underneath* the plane. Preferably, this device should be set for 500 feet so that it would not give out unnecessary alarms with normal 1,000 feet seperation, but would still warn you soon enough when your seperation became 500 feet or less. This would be valuable, not only in VFR climbs and descents, but when on instruments during cruise and in holding patterns, etc.

The next thing needed (and this could serve as a temporary fix until an electronic device can be perfected) is the installation of a pair of *mirrors* on each side of the plane near the cockpit windows, one pointed upward and slightly toward the rear, the other directed downward and slightly forward. They would have to be adjustable from the inside, streamlined, and electrically heated to keep them clear.

In order to check on the necessity of the above suggestions, I think a test should be run as soon as possible using three aircraft, two of which would purposely position themselves directly above and below each other to check for blind spots while the third plane stayed off to one side to monitor the procedure and give warning if the planes began getting too close. The same method could be used in testing the mirrors and electronic equipment after they were installed.

'Piggy-Back' Killer

Lately, we have been putting a great degree of stress on the increasing danger of head-on, or relatively head-on collisions due to the ever-increasing closing speeds of modern airplanes. I certainly do not intend to minimize this danger (for it is definitely a grave one), and everything possible should be done to remedy it. The use of airborne radar and the installation of an electronic proximity warning device indicating the quadrant (front, rear, left, or right) from which another aircraft is approaching are a must. But, in our concentration on closing speeds, let's not overlook the piggy-back condition. It can be a killer. We need a proximity warning system aimed directly overhead and directly downward just as much or more than we need the four other quadrants covered—for it is there that we have no visibility at all.

Until something like the above suggestions can be installed, I think it might not be a bad idea for us to go back to the old practice of making little "S" turns while climbing and descending VFR.

Of course, I know we all agree that VFR flying is rapidly becoming outmoded for present-day speeds and traffic congestion. We need a new system wherein *all* traffic can be controlled 100% of the time, regardless of weather. Unfortunately, it will still be some time before this is possible. In the meantime, we're stuck with VFR. Let's try our very best to *live* with it!

Re-Employment Rights For National Guardsmen

Labor Secretary Reports: "Same As For 'Ready' Reservists"

Young men who leave jobs for training in the National Guard or Air National Guard have re-employment rights under the Universal Military Training and Service Act, Secretary of Labor James P. Mitchell pointed out recently.

Guardsmen who train in regular two-week summer encampments, weekly or weekend drills are entitled to the same re-employment rights accorded ready reservists performing similar training. They are entitled to a leave of absence and reinstatement in their jobs without reduction in their seniority, status and pay, except as such reduction may be made for all employees similarly situated.

Mr. Mitchell stressed, however, that the Federal re-employment rights statutes do not cover National Guardsmen called out by a State Governor for local duty, such as in the event of riots or prison breaks. He also pointed out that guardsmen who perform six months' active duty for training as provided in the 1955 Reserve law, have only "leave of absence rights"; they do not have the full protection accorded ready reservists who perform six months' training.

"The buildup in the Reserve forces authorized by the Armed Forces Reserve Act of 1952, as amended by the Reserve Forces Act of 1955, is of paramount importance to national defense," Secretary Mitchell said. "The National Guard and Air National Guard have always been an integral part of the first line of defense. Young men who train in the Guard to keep our country militarily strong should be permitted to do so without losing their employment status."

The Labor Secretary suggested that guardsmen, employers and labor organizations refer re-employment rights questions to the nearest field office of the Department's Bureau of Veterans' Re-Employment Rights for clarification.

State Of The Association

This report has been produced to inform the Board of Directors as to the current status of ALPA's operating structure, accomplishments, goals, and problems confronting the Association. In general, it summarizes and compares the periods between conventions from October, 1954, until October, 1956. In certain instances, where necessary, explanatory material of a historical nature beyond this period is also presented.

It is hoped that this report will not only be a valuable source of information to the Convention delegates in making decisions on the important questions facing the Association, but will also serve as a valuable reference in Local Council affairs.

Services ALPA Renders Its Members

The Association has steadily enlarged and increased the services it makes available to the individual member. Today ALPA makes available and performs many more services for its members than any other association or union in American society. The following is a partial list of special services now provided the member of ALPA:

- Negotiations and maintenance of employment agreements to provide him with rates of compensation, rules and working conditions appropriate to the piloting profession.
- Representation in the problems connected with the maintenance of his license as a pilot.
- Representation in grievances he may file as a result of any action taken by his employer which may affect him.
- Representation in any medical problems arising with his employer or the federal government licensing authorities.
- Representation in cases involving civil penalties or license suspension or revocation actions brought against him for alleged violations of Civil Air Regulations.
- Representation in actions brought against him by municipalities or states for alleged infraction of aviation regulations.
- Representation in mergers or consolidation of air carriers to ensure that he (1) Shall have the opportunity to follow his job into the new company. (2) Shall not suffer loss of compensation or unusual expense in connection with the merger. (3) An opportunity to participate in the problems of integrating seniority lists free of interference by outside groups.
- Political and legislation representation locally and nationally on all subjects in connection with his professional life as a pilot or his membership in a labor organization.
- Representation and participation in technical and air safety subjects which may affect his safety, the efficiency of his job or his welfare.
- Representation from a public relations view so as to maintain him and his profession in the most favorable public view.
- Receipt of current information concerning his profession through ALPA publications.
- Representation internationally through IFALPA, the ITF, and participation in international forums such as ICAO in order that his views may be made known to and with those of the pilots of other countries.
- Employment information and help is available to him at the Association's Home Office.
- Protection against loss of income due to sickness or accident or loss of pilot's license at favorable rates.
- Emergency funds for his family during the probate of his estate in the event of death are available through participation in Mutual Aid.

About The Article

At the 12th Convention of ALPA in 1952, the President inaugurated the practice of submitting to each delegate a State Of The Association Report. *This was in lieu of a lengthy oral presentation to provide delegates with important information in readily accessible form. A similar report was submitted to the 13th Convention in 1954 and the 14th Convention in 1956. These reports have previously been available to members for reading through their Local Officers. However, there have been numerous requests that this report be made directly available to all members in order that they may know how ALPA is organized, the manner in which it is being run, and what has been accomplished during the past two years. In response to these requests,* The Air Line Pilot *is printing excerpts from President Sayen's* State Of The Association Report *made at the 14th Convention. This is the first installment of* The State Of Association, *which because of its length will be run serially in several issues of* The Air Line Pilot.

- Life insurance at special rates for air line pilots through the ALPA Group Life Insurance Program.
- He may borrow from the Association's Credit Union.
- He may invest in the Association's Credit Union.
- And most important of all, he is given the opportunity to associate with one of the finest groups of professional men in our society and participate in decisions which are made affecting his and their welfare.

Association Structure

Membership

	Oct. 1954	Oct. 1955	Oct. 1956
Active	9,422	9,781	10,914
Apprentice ...	149	448	791
Inactive	2,425	2,521	2,927
Exec. Inactive.	0	113	111
Exec. Active..	33	24	26
Honorary	19	19	19
Total.....	12,048	12,906	14,788

Councils

The basic representing unit of the Association is the Local Council. There are currently 133 Councils. American Airlines has the largest number of Councils—12. PAA Council No. 36 is the largest single Council with 478 members, Chicago Helicopter Airways, Chicago, Council No. 108, is the smallest with 7 members.

The Association has foreign-based Councils at Anchorage, Alaska; Ketchikan, Alaska; Lima, Peru; Puerto Rico; Honolulu; London, England; Frankfurt, Germany; Cairo, Egypt; Tokyo, Japan, and Hong Kong, China.

Board of Directors

The highest governing body of the Association is its Board of Directors. The Board is composed of Council Chairmen and Senior Copilot Representatives of each Council. The Board of Directors meet biennially when they are delegates to a Convention. Between Conventions they may decide issues by mail ballot or in special meetings. There are now 263 Directors. There were 230 Directors in November, 1954, representing 118 Councils. The uneven number results from the fact that some Councils do not have Copilot Representatives. The air lines represented are: Alaska, Allegheny, AAXICO, AAL, Bonanza, BNF, CAP, Caribbean-Atlantic, Central, Continental, Chicago Helicopter Airways, Cordova, Delta, EAL, FTL, Frontier, Hawaiian, Lake Central, Los Angeles, Mackey, Meteor, Mohawk, NAL, NYA, North Central, NEA, NWA, NCA, OZA, Overseas National, Pacific Northern, PAA, Panagra, Piedmont, Resort, Riddle, Seaboard & Western, Southern, Southwest, Transpacific, Trans-American, Transocean, Trans-Texas, TWA, UAL, Western, and West Coast.

Executive Board

The Executive Board has the power and authority to control the Association between Conventions. It consists of the Chairman and Senior Copilot Representative of the Master Executive Council of each air line. With 47 air lines presently in ALPA, the Executive Board consists of 91 pilots. The Executive Board does not hold regular meetings but may be called into session by the President, the Executive Committee, or, at the request of 30 per cent of the Board itself. In 1954, the Executive Board was composed of 78 pilots from 40 air lines.

Executive Committee

The Executive Committee is charged with maintaining continuity in the pilot management of the Association and acting in the capacity of owners' representatives and general trusteeship of the Association's business and funds. It acts in consultation and cooperation with the President in furthering the objectives and policies announced by the Board of Directors or the Executive Board. It recommends policy to the Executive Board and the Board of Directors. The Executive Committee is composed of the five (5) Regional Vice-Presidents together with the President, the First Vice-President, Secretary and the Treasurer.

Officers

The officers of the Association are elected at each biennial convention. Regional vice-presidents are elected for 2½ years by direct membership vote on a staggered system, one being elected every six months.

Association International Offices

The International Offices of the Association are located in Chicago, Illinois. The organizational structure is broken down into the following departments:

- Executive
- Administrative
- Council Coordination and Administration
- Accounting
- Employment Agreement
- Legal and Conciliation
- Engineering and Air Safety
- Research and Statistical
- Education and Organization
- Publicity and Public Relations
- Personnel and Purchasing
- Mimeographing and Mailing
- Legislative and Washington Representation
- Insurance.

Regional Offices

ALPA maintains a Washington Office and regional offices in New York, Miami, and Los Angeles. The regional offices have been equipped and staffed in Los Angeles and New York City since 1952. The space available in the Washington and Miami offices has been doubled. Procedures have been worked out to coordinate the regional offices with the Home Office. The methodical activation of regional offices has provided an opportunity to evaluate their advantages to the ALPA structure and to weigh the advantages and disadvantages of regionalization and the best utilization that can be made of such a step.

Location of the Washington and regional offices follow:

Washington, D. C.:
Room 859-861 National Press Building, Washington 4, D. C. Telephone: National 8-2166.
Washington Representatives: Larry Cates, T. A. Basnight. Secretary: Patricia Gray.

New York:
Lincoln Building, Room 1329, 60 East 42nd Street, New York, N. Y. Telephone: Oxford 7-0233.
Secretary: Dorothy Stuchell.

Miami, Florida (Coral Gables):
2012 Ponce de Leon Blvd., Coral Gables, Florida. Telephone: Coral Gables 83-3375.
Representative: Karl Ulrich. Secretary: Mrs. Ann McElhiney.

Los Angeles, California:
6216 West Manchester Blvd., Los Angeles 45, California. Telephone: Orchard 1-7543.
Regional Representative: Howard Jones. Secretary: Annette Wiener.

In addition, Local Councils maintain their own offices at Kansas City, Mo., Minneapolis, Minnesota; San Francisco, California (Palo Alto); Denver, Colorado; Dallas, Texas; Seattle, Washington; Jamaica, New York; and Jacksonville, Florida.

Employees

The Association currently has 83 full-time staff employees: 31 Executive and Professional, 47 Secretarial and

Clerical, and 5 Maintenance (building).

This compares to 22 Executive and Professional employees in 1954, or an increase of 40 per cent in the past two years. In addition, part-time employees are utilized, bringing the staff up to 100 people as work demands. This is supplemented by specialists in various fields such as consulting actuaries, economists, attorneys in regions for special projects, etc.

Executive And Administrative

The Association's structure provides that the supervision and administration of ALPA's affairs, when the Executive Board, Board of Directors or Executive Committee is not in session, shall be under the direction of the President of the Association. There is also provision for a full-time Executive Vice-President. The offices of First Vice-President, Secretary and Treasurer are filled by active air line pilots, who perform their functions while flying for their respective air lines. The officers of the Association must:

- Translate resolutions of the Executive Board, Board of Directors, Executive Committee and Master Executive Councils, into specific administrative policies.
- Provide for adequate staffing to carry out such policies.
- Provide coordination between the forty-seven different air line groups constituting ALPA.
- Operate the Association honestly and efficiently.
- Maintain the dignity of the organization.
- Insure compliance with the policies and laws of the Association by the membership.
- Maintain proper relations with the general public and public agencies.

Coordination And Supervision

Authority is delegated and responsibilities so assigned that a number of projects may be processed concurrently and still have adequate supervision and direction. Administration is accomplished in the following manner:

- The organization's activities have been separated into two main categories (1) Administration, and (2) Representation. Scruggs A. Colvin is assigned the general supervision of all administrative details such as membership, Council elections and coordination, the Association's housing, secretarial and clerical staffing, membership records, purchasing, personnel, etc.
- Department heads have been designated as follows: Employment Agreement, J. C. Christie; Legal and Conciliation, F. H. Bennett; Accounting, C. Rohles; Engineering and Air Safety, T. G. Linnert; Education and Organization, V. J. Herbert; Publicity and Public Relations, E. C. Modes.
- Duties of staff members have been assigned to provide for "emergency" projects being handled in a routine manner and for the definite fixing of responsibility.
- The activities of the Association have become so numerous and complex in the last few years that planning must provide for a large number of projects to be handled concurrently. Prior to 1951, the Association as a practice concentrated largely on one project at a time and devoted most of the staff and resources to it. As a result, work was stalemated and progress halted. As a matter of administrative policy, planning is now oriented toward keeping the staffing and planning of the Association in such condition that all projects may be processed at their normal pace and without delays due to inadequate preparation, training, or staffing. Such procedures require constant planning for anticipated work loads which are unpredictable in nature. Demands upon the Association vary widely from time to time depending upon the complexity and duration of projects. In addition, unanticipated projects continually arise which must be handled. Routine staffing must, therefore, take these factors into consideration. Arrangements have also been concluded with outside consultants, attorneys, and experts in various fields who may be utilized as necessary. In this manner, the work of the Association is now kept current.

ALPA's President's Department (Pres. Sayen in insert).

- On June 25, 1956, the union of Air Line Pilots Association Professional and Administrative Employees which had been certified by the NLRB in 1952 as the representatives of ALPA's professional employees, was dissolved by the employees.
- The salaries of staff members have been increased by a system of job classification and longevity. Heads of Departments receive extra compensation for such responsibility. Staff members also participate in a bonus incentive program inaugurated in 1956. The staff members are permitted to participate in the Association's Group Life program, but not in the Mutual Aid or Loss of License programs.

The secretarial, clerical and maintenance employees are covered by a wage and rule policy adopted and placed into effect on November 19, 1951. This policy has been reviewed and adjusted periodically. Compensation is determined principally by job classification and length of service. Rules governing such items as sick leave, vacation, etc., are common to all employees. A retirement program inaugurated in 1955, is available to all employees and included past service credit financed by the Association.

- A large measure of Association work is handled by pilot representatives with the cooperation of staff members and Association officers. While flight pay loss at increased rates of compensation remains a problem, the present officers still hold to the theory that a maximum of self-representation, if intelligently coordinated and executed, is desirable. Flight pay loss in 1954 and 1955 would provide the Association with 25 full-time pilots. Of course, these payments were made to hundreds of pilot representatives.
- Pilot representatives, in addition to assuming a larger measure of respon-

ALPA's Council Coordination and Administration Department.

sibility for local administration of Association affairs, keeping their membership informed, etc., are serving as the principal spokesmen on current technical and safety projects and many other ALPA activities described in this report.

The staff of this department consists of: C. N. Sayen, President; Kay McMurray, Executive Vice President; W. W. Anderson, Executive Assistant; Viola Colby, Secretary to the President; and secretaries Doris Schrader and Mary Ann Burke.

Council Coordination And Administration

The work of the Association has been divided into two main divisions: (1) Administrative; (2) Representative. The administrative functions are broadly as follows:

- The proper organization of local councils, the maintenance of records, the conduct of elections, etc.
- The maintenance of current and accurate membership records.
- The organization and establishment of representation for pilots of air lines who desire to become part of ALPA.
- Physical arrangements for Master Executive, Local Executive Councils or Board of Directors' meetings.
- The conduct of Regional Vice President, Local Executive and Master Executive Council elections.
- The maintenance of liaison between air lines and councils.
- The supervision of the physical property of ALPA, management of the Association housing, purchasing, staffing, etc.
- The maintenance of an efficient communication system and provision for adequate mailing facilities for councils, membership and the ALPA departments.

Organization

Following is a list of air lines on which pilots have been aided in organizing since October, 1954: Los Angeles Airways, Inc., Mackey Airlines, Inc., Chicago Helicopter Airways, American Export and Import, Transocean Air Lines, Meteor Air Transport, Seaboard & Western Airlines, Inc., Overseas National Airways, Cordova Airlines, Trans-American, and Ellis Airlines. Eighteen Councils have been established.

Personnel

This function includes the implementation of Association personnel policies, the maintenance of adequate secretarial and clerical employees, maintaining records for insurance, sick leave, vacation and maintenance of reserve personnel for peak work demands.

Purchasing

The purchasing of the Association is largely done by centralized purchasing with distribution of supplies being made to departments and the local councils. This function, therefore, includes the purchase of all office equipment and supplies needed to carry on the business of the Association, the supervision of the supplies, proper inventory and control of the stock room, the checking and approving of invoices for payment, and the provision for maintenance of the Association housing.

Mimeographing And Mailing

The Association maintains a policy of promoting a maximum exchange of objective and factual information between members and councils to encourage a free flow of information. The mailing facilities of the Home Office have been made available to council and MEC officers. The results have been encouraging. The flow of information to the membership has multiplied many times with beneficial results. The increase in postage costs (over $36,000 last year, as compared to $31,000 in 1954) has been justified by the results. This, however, was not accomplished without problems.

Previous planning for the interchange of information at the Local Executive Council and the Master Executive Council levels, as well as the Home Office level, has materialized in the production of LEC News Letters and MEC News Letters and the Bi-Weekly News Bulletin, thus utilizing to the fullest extent the modern production and mailing facilities of the Association.

The greatly increased volume of mimeographed material, the bulk of which was eventually handled as mail was adequately processed through the use of modern machinery so that it arrived in the hands of members while still current with priority to matters of urgency. The heaviest day's output was February 16, 1956, when 20,000 pieces of mail were processed. As of October 10, 1956, 755,662 pieces of mail have passed through the mail stamping machine in the Home Office this year. This was done in a department with five full time employees, supplanted by part time help.

The reproduction of Association correspondence has been on a planned basis to where we now have one of the most modern shops in the area. Equipment includes high speed mimeographs, the newest type of multi-lith, automatic tieing equipment, electric staplers, commercial type folding, keyboard graphotype and automatic addressographing. Material preparation is done by either varityper or the electric typewriter.

Filing

The Home Office has installed a complete system of central filing. This system not only results in a better organization and preservation of the vital records of ALPA, but relieves departments and secretaries of filing duties which enables them to devote more time to their primary functions.

All filing necessary to the Association record keeping, but which is only used for reference, has been placed on microfilm rolls or strips.

The staff of this department consists of: Scruggs A. Colvin, Administrator; Glyn Johns, Council Coordinator; James R. Murphy, Administrative Assistant. Secretarial and clerical: Phyllis Cammack, Louise Basso, Patricia Baudoux and Cornelia Bieze. Membership: Dorothy Townsend, Mar-

garet Hoppe, Glada Crawford, Ruth Zeniwick. Receptionist: Barbara Galinski. Switchboard: Betty Conner. File: Mildred Jendersak. Mail Room: A. Johnson, Supervisor; Dorothea Stein, Mildred Kalinowski, Lorraine Caldwell, Ruby Svidron. Maintenance: Adam Frank, Supervisor; (and a crew of four).

Financial And Accounting

The Association's income is derived from payments made by the membership in the form of dues, initiation fees, and penalties, and in addition, per capita tax payments from affiliate organizations, rent, income from investments and miscellaneous sources.

Financial Problems

The Association's financial problems are largely concerned with:

- Collection of Dues.
- Maintenance of accurate financial records.
- Handling of investments and reserves.
- The payment of obligations incurred in operating the organization.

These financial activities are under the direction of the Treasurer, working in cooperation with the President of the Association. The work of the department is under the supervision of the Controller, who reports directly to the Treasurer.

Further improvements have been made in the methods by which the Association obligations are paid, with payment of those obligations under $500.00 being made directly by the Controller and payments in amounts over $500.00 receiving final approval of the President and Treasurer before payment. By this method, it has been possible to institute rules under which properly authorized and documented accounts may be paid within five days. As a matter of record, they are usually paid within two days. This has relieved the officers of the Association from much tedious work.

As a result of the adoption, at the 13th Convention, of revised By-Laws pertaining to payment of dues and collection thereof, it has been possible to improve upon our methods of collecting amounts owing to the Association from members. The result has been an increase in income, accruing to the benefit of all members.

Current Situation

ALPA has prospered as a business since the last Convention. The success of a business may be measured in part by the increase, if any in the assets and cash position and in the benefits accruing to the stockholders (members) as a result of the organization. The assets of the Association have increased some $772,761.26 since our report to the last Convention.

In compliance with the requirements of the By-Laws, the members were refunded approximately $389,000.00 as a dues dividend in May of 1956, as a result of the business activity during the fiscal year ending September 30, 1955.

Again in May, 1957, based on our financial position at the close of the fiscal year ending September 30, 1956, we will be in a position to pay a dues dividend in the approximate amount of $315,000.00.

In spite of the dividend paid for 1955, and in spite of the projected dividend for 1956, the Association has gone forward in the fields of increased representation and services to the membership with its accompanying costs.

Review Of Cost Of Operation

The listed assets of ALPA increased from $2,602,114.12 as shown on the September 30, 1954, audit to $3,374,875.38 as shown on the September 30, 1956, audit. This is a total increase in assets of $772,761.26.

In addition to the assets listed, there is $110,000.00 set aside in a Behncke escrow fund to guarantee pension payments, which cannot be utilized by the Association at this time. $701,542.35 represents investment in the Home Office building and property. $54,912.64 represents equipment for the Home Office and Regional Offices.

Costs of operation have also risen. For example, cost of operating ALPA in 1951-1952 was $954,685.86, in 1952-1953 was $1,096,885.07, in 1953-1954 was $967,709.20, in 1954-1955 was $1,516,236.19 and in 1955-1956 was $1,507,171.78.

Improved Accounting Procedures

Steps are continually being taken to modernize the accounting systems of the Association so as to provide a more accurate reflection of the income and expenditures of the Association. As an example, we have begun to utilize IBM equipment in some of our operations, and it is expected that we will proceed further along these lines.

Project Accounting

We have continued our method of placing disbursements on a project-cost basis so that it is possible, at any time, to determine how much has been spent on any specific project. In addition, we have also placed the Home Office Departments on a budget-control system so that the operating costs of each department can be periodically reviewed and compared with the estimated budget. Relating these costs to the estimated budget has proven the estimated costs to be very close to the actual costs. It is, however, still impossible to budget pilot expenses accurately.

Future

The income of the Association has risen in the past year due to an increase in the membership and an increase in the average compensation received by the members. This in itself, not taking into consideration other factors, calls for an increase in our representing machinery, which means additional expense. Another factor which will increase our operating cost is the fact that as pilot income increases so does the cost of representation work done by pilots, inasmuch as the member doing representation work is reimbursed as though he had worked for his airline. This cost

ALPA's Treasurer's Department.

has risen rapidly in recent years and has been aggravated with the negotiation of retirement plans and other fringe benefits now reimbursed by ALPA to many companies at a cost as high as 20% of payroll. The salaries of our staff and other personnel have also increased commensurate with increases in total employees, the inauguration of a retirement program, and increases in salaries.

Investments

The investment program of the Association is under the supervision of the President and the Treasurer, and is subject to review by the Executive Committee. Consultation is provided by the investment division of the American National Bank and Trust Company of Chicago.

A conservative investment program is being followed of 40% government bonds, 35% corporate bonds, and 25% preferred stocks. The objective of producing a 3% return has been generally met.

As of September 20, 1954, the Association owned $1,209,137.90 in such investments. This has been increased so that as of September 30, 1956, the Association owned $2,361,275.23 in stocks and bonds and $10,000.00 in the ALPA Federal Credit Union.

The $110,000.00 retained in the Behncke Escrow Account remains the property of ALPA, but must remain in escrow as a guarantee against pension payments to Mrs. Behncke.

ALPA Property

The ALPA land and building at 55th Street and Cicero Avenue are completely paid for with the final payment having been made July 15, 1956. Plans are currently in process for a re-arrangement of the interior of the building to provide for greater efficiency. In addition, some 2000 square feet of that space (8000 square feet) currently rented to Mid-States Freight Lines, Inc., are being taken over by the Association to provide space for our increased personnel at the Home Office. The annual income in rental to the Association of that space leased or rented is $31,000.00, making it possible to occupy our building on a more economic basis and at the same time have space available for future expansion.

The vacant portion of our property to the north of our Home Office building has been leased to provide additional revenue.

The value of our building and land is shown on our books as $701,500.00 after allowing for depreciation on the building at a rate of 2% per year over a fifty year period.

In addition to this, the Executive Committee has authorized the purchase of property near the Los Angeles airport and the building of a Regional Office.

Financial Reports

Reports are made to the Board of Directors and Officers of the Association on the financial status of ALPA each quarter as provided by the Constitution and By-Laws. These reports have been revised so as to reflect the change in the accounting procedures of the Association and provide the Board of Directors with the actual costs of the various projects of ALPA.

Treasurer's Report

The Treasurer of ALPA is making a complete report to the delegates at this Convention.

ALPA Insurance Program

On March 16, 1956, the Treasurer's office assumed responsibility for the Group Life and Loss of License programs. This action was necessitated in order to cope with the many new problems arising from the rapid growth and expansion of the Insurance Department. An outline of the growth of these functions is reported elsewhere in this "State of the Association" report.

Recommendations

In the opinion of this officer, the By-Laws provisions covering the fiscal functioning of ALPA as revised in 1954, seem to be functioning satisfactorily, and except for the minor revisions recommended by the Executive Committee, should be continued except for a revision upward in the maximum reserve of the Association to $300.00 per member to keep this account in line with changes in the economy.

The staff of this department consists of: Don J. Smith, Treasurer; Charles Rohles, Controller; Stanley Mohawk, and Vera Fibiger, Assistants, secretarial, and clerical: Fanny Hoenicke, J. Kovach, Lorraine Williams, Mary O'Hara, Myrtle Danek, Nyela Carpenter, Carolyn Zubricky, Helen Seyfried, Laverne Wilson, Anne Cherry and Marie Lamont.

(Continued in next issue)

Human Relationships In Air Transport

Are Obsolete Human Relations Practices Blocking Logical Industry Development?

By Capt. William Karraker
PAA

It is hard for me to remember the exact point at which it dawned on me that, while the technical material afforded us to assist our getting an aircraft from here to there had become more copious than any one of us could entirely assimilate, the books and articles on the effects of relationships between members of cockpit crews, between pilots and mechanics, between crews and schedulers, between captains and passengers, etc., upon safety and efficiency were measurable in inches on a book shelf.

Managements, in our business, seem for the most part to be operating upon the basis of strictly "mechanical logic." A pilot is "well paid"; therefore it is incredible that he should suddenly rebel against cramped quarters of a modern cockpit, and rip out the fluorescent light upon which he has burned his hand while reaching for a control. A pilot is stuck on a run which involves an excessive layover at a town which, for him, is the dullest place in Christendom; and so he gets into trouble for drowning his boredom at an available pub. Some managers say, "He wasn't 'working' but 60 hours a month, so he should have been 'happy'."

Entering A New Stage

Our Association has been emerging for the past few years from the "promotional" stage—evolving into the "operational" stage. The first period was necessary, and involved the forcefulness many of us remember. Our new approach is just as necessary to the operational era of ALPA. No longer is membership precariously maintained by "sword rattling," open warfare with "Management" as a genus, and browbeating of recalcitrant "freeloaders."

Instead it is clear to the veriest dunce that ALPA membership is so valuable to pilots that no one of us can afford to stay outside. In this changeover of our Association "personality" it is noticeable that either new persons have taken over Council chairmanships, and other offices, or the "old-timers," who still hold office, have kept pace with the changeover, and stayed flexible in mind and personality.

Management Lagging

I may betray limited knowledge, or even an unconscious prejudice when I state my impression, that many members of Management in our field have not been able to make the transition from "promotion" to "operation," and so—strictly on the basis of obsolete human relations practices—are holding back logical development of their companies and our industry in general. Destructive rivalries can easily be observed between Managements, in place of constructive (improved service) competition. The most absurd types of intra-Management cleavage; such as petty haggling over status symbols, and constant evidences of insecurity over jurisdiction, hamper company operation.

The foregoing broad views of the state of Human Relations in some parts of our industry present fertile and fallow fields for study.

I am hampered in this broad study by limitations of my field of observation, and by "point of view," both of which are unavoidable. I am a captain (and so can never fully appreciate the position of a copilot or other crewman), working for Pan American (therefore without knowledge of domestic flying, or even the practices of other companies in the international field), flying in South America (thereby limited in knowledge of geography and passenger anthropology.)

I can think of a few examples, but not nearly enough. In 1950, while I was serving on our Negotiating Committee, with Clancy Sayen as ALPA negotiator, I was dubious when he inserted "For example . . ." in many clauses of the Pay section of our Employment Agreement. For an ex-lawyer like me, it was sacriligious to put a worked-out example in a contractual document. But Clancy was dead right! Nothing helps understanding of broad principles more than concrete examples to illustrate and support them.

Cites Examples

Let me give a few examples of examples so that you may understand what I mean by human relations in air transport.

About The Article

The author says: "This is both an article and a request. I think the article states the problem and it is hoped that the air line pilots who read and agree with this problem, will send me material for correlation into specific categories of case histories designed for use in study and action by myself and others."

The author will appreciate hearing from all interested readers on the subject matter of the articles. All case histories will be preserved in strictest confidence, with credit for the material given only when expressly permitted. Please address all communications to William Karraker P.O. Box 5, Redding Ridge, Conn.

For example, one night we were on instruments, holding over Scotland MH facility, waiting at 10,000 feet for an approach to Idlewild. The copilot, a fine, friendly, mild-mannered chap, was flying and I was handling the radio. We were cleared by the controller to descend from 10,000 feet, and I reported that we were leaving that altitude. We began to descend. At about 9,700 feet the copilot started his flap down toward 20 degrees to keep his airspeed low in the descent. As he did so the aircraft began to "balloon" back toward 10,000 feet. I took an ill-considered, "emergency" attitude, and shouted, "Don't let it get back to ten!"

To my surprise the copilot's totally-out-of-character response was, "If you don't want me to fly this thing, you take it!"

The "ballooning" had stopped, and everything seemed under control so I told him in as even a tone as I could summon, that he should go ahead with the let-down. But lightnings played across the cockpit.

If both of us had been different people we might have left the existing rupture open to affect all our future contacts, and our general estimates of each other. But we talked it over. Here is what had actually happened. The copilot *had* noticed the "ballooning" as it began to occur. His corrective actions had been not only to reduce power, but to bring his flap back from 20 degrees toward 10 degrees. I had shouted, "Don't let it get back to *ten,*" meaning *"thousands of feet."* He had thought I was criticizing his corrective action of reducing flap to ten *degrees.*

Human Relations Value

This was an odd coincidence, involving a simple breakdown of communications. When a good Human Relations background exists in a crew or a company these little incidents are resolved and actually made bases for even better total attitudes. When Human Relations are generally disregarded such incidents are simply pieces of fuel stored to feed future fires, of conflict.

Christmas At Idlewild

For example, a few nights before last Christmas a gusty wind was sweeping sleet across the ramp at Idlewild. The holiday rush was justifying a departure about every 15 minutes during the four hours before midnight.

During the prior-to-takeoff runup we detected an inoperative engine-driven alternator, one source of emergency AC power. Our operating manual advises that this is not a "no-go" item unless there are replacements in stock at the station of departure. I learned by radio that New York did have an alternator in stock, so we trundled back to the line.

The chief mechanic literally "boiled" through the forward entrance door as soon as our engines stopped, and his opening salvo was, "Who told you to come back here?" followed by, "Don't you know that an alternator is not a required repair?"

My adrenaline began to flow copiously, my hair stood on end, and I gathered myself for a blast that would eliminate this fellow from the land of the living. You, who are captains will wonder how "lily-livered" a guy can be who lets a slur on his "command authority" such as that go unchallenged.

But immediately I forced myself into the chief mechanic's point of view. He was nearing the end of a shift that had combined murderous weather with a ramp saturated by numerous departures and arrivals. The sheer problem of finding a spot to place our aircraft for the repair was overwhelming. In short, these things and some others caused me to be dealing with a desperate man. I took a grip on my seat, not trusting myself to talk, and let the man finish his tirade and supervise the repair.

The next time I saw him the sun was shining, the air was relatively balmy, and our mid-morning departure was being made from a near-empty ramp. The same chief mechanic was on duty, but, in truth, he was a different man. It wasn't necessary for me to bring up our previous encounter. He talked freely about it himself, and

without embarrassing me by a formal and meaningless apology simply said he hadn't felt right about the way he had talked that night. Man-to-man, with clear eyes and minds, we reproduced the incident and exchanged information and points of view. He had not realized—among other things—that, by returning to the ramp, we were saddling ourselves with two extra payless hours before one of our longest-duty, but poorest paying runs. Under the conditions he regarded himself as the only one burdened by the return.

If this man had been "dressed down" in the sleet and slush, or even later, his response to hostility would have been defensive hostility, and his scorn for pilots in general, and me in particular, would have jelled into a fixed thing. Now I like to think that he and I are better men in the total work situation because of the incident and its resolution.

Wants Others' Experiences

The foregoing examples are some of the types of cases which are part of human relations in air transport. There are any number of others that many pilots may be familiar with. Do you have, for further example, any old pilots around your base station, stuck in artificial ground jobs created to bridge the gap between the day a physical examination "grounded" them, and their first day for retirement? Do they take it well, and do what they can to make their jobs a real contribution, or do they sulk like clipped-wing roosters, and alternate between griping and boring you with nostalgic tales about "wooden airplanes and iron men"? Is your chief pilot or flight manager maintaining his ALPA membership, and so indicating orientation toward flight operations and crews, or has he shed all semblance of comaraderie with his men, and so lost touch with them?

Above all, I wonder on how many air lines all or part of the members of crews are scheduled as units. I'm familiar only with our line where no effort is made to schedule pilots and co-pilots together; much less whole crews. For me, this is like being the foreman in a machine shop with a different group of machine operators being put in the shop every day; *except* . . . . the stakes are higher in an aircraft.

There is a distinct need for thorough study of specific cases in the field of Human Relations in air transport and the possible effects upon them and their work of what is known or may become known of proper methods of personnel management.

The ALPA Camera

UAL Vet Retires

Capt. Richard L. Dobie, pioneer UAL pilot, recently had a DC-7 Mainliner named in his honor. He learned to fly in 1917, later logged 1,000,000 miles for United, then switched to administrative work before retiring two years ago. Shown with him on christening stand are his wife and W. A. Patterson, UAL president.

Office Queen

Nyela Carpenter, Accounting Dept., represented ALPA Home Office at Chicago Office Queen contest, sponsored by Office Management Assn. of Chicago.

Indonesian Visitors

G. R. Johns, Council Coordinator, acquaints Indonesian labor leaders with ALPA operations during recent tour of Home Office. Shown from left: N. N. Rangkuty, General Secretary, Indonesian Plantation Workers' Union; M. Pradjasasmita, S.B.P. Airline Workers Union.

National Hearings

Shown during hearings at Miami (l. to r.): R. J. Rohan, Henry Weiss, Pres. Sayen, David Cole, Neutral; J. M. Rosenthal, NAL Senior Vice President; L. Dymond, Asst. Vice President; A. G. Hardy, Vice President.

Social Security Revisions Applied To Pilots

How 1956 Amendments To Social Security Act Can Be Of Benefit To Air Line Pilots

By William J. Mac Williams
ALPA Director of Research

The 1956 amendments to the Social Security Act should be of interest to all pilots. These amendments, when viewed in connection with the Pilots Retirement Program, improve the benefits available due to disability retirement or the exercise of the level income option which exists in all ALPA negotiated Retirement Plans.

On August 1, 1956, the Congress approved amendments to the Old Age and Survivors Insurance provisions of the Social Security Act. These amendments are of interest to the pilot primarily for three reasons:

- Early benefits are now provided for permanently and totally disabled persons;
- The retirement age for wives of retired pilots and widows has been lowered; and,
- Effective January 1, 1957 the employee contribution toward Old Age and Survivors Insurance will increase to 2¼% of $4,200.

Former Benefits

Prior to the 1956 amendments, a disabled person received benefits at age 65 equal to those benefits earned to the time of disability. Thus, a pilot, who was fully insured at age 50 and who became disabled, would receive the maximum benefits payable, $108.50 per month when he attained age 65. The 1956 amendments, however, provide that the pilot may receive full benefits at age 50 provided:

- That he is disabled with the "inability to engage in any gainful activity for reason of any medically determined, physical or mental impairment which can be expected to result in death or be of long continued and indefinite duration."
- That he furnishes proof of such disability.
- That he has an employment history which demonstrates that he is fully and currently insured at the time of disability. An employee is fully insured if his employment is covered in at least six of the ten quarters between January 1, 1955 and July 1, 1957 or if he dies or retires after July 1, 1957 and his employment is covered in all but four of the quarters between January 1, 1955 and his death or retirement, whichever occurs first.
- That he has twenty quarters of Social Security coverage during the forty quarters of employment ending with the quarter in which the disability occurs.
- That he must wait six months between the time of disability and the receipt of the benefits.
- That he will have the disability benefits reduced by the amount of benefits payable, if any, under Workmen's Compensation Insurance and other Federal disability benefits.
- That he is willing to undergo Vocational Rehabilitation Services after referral to appropriate state agencies by the Secretary of Health, Education and Welfare.

These disability benefits should be related to such benefits payable under ALPA's Retirement Programs. For example, nearly all of the ALPA negotiated Retirement Programs provide that a pilot shall receive a disability retirement which is equivalent to the benefits accrued to date of disability but actuarially reduced because of early retirement.

Assuming that a pilot has been employed for twenty years and has averaged $12,000 per year in wages for the entire period, his retirement benefits at age 50 would be approximately $3,800 per year. In addition he is now eligible to receive approximately $1,300 per year as a disability benefit under the Social Security Act, or a total of $5,100 per year.

Alternatives Listed

Several alternatives are available to the pilot as to when he may elect to receive disability benefits from the ALPA negotiated programs.

- If he is a member of the ALPA Mutual Aid and Loss-of-License program, he may receive a maximum of $500 per month for four years. By deferring the receipt of the benefit due from his retirement program for the full 48-month period, he can increase the disability benefits. This is possible in two ways. First, the deferral will increase the benefits because the years of early retirement will be reduced and thus the actuarial reduction in benefits because of early retirement will be reduced. Ordinarily this will increase his pension about 24% or 6% per year. Second, the pilot covered by a reduction in benefits of 3% per year of early retirement because of disability will effect a savings of 12% in benefits by deferring the receipt of benefits for the 48-month period.
- If he is not a member of the ALPA Mutual Aid and Loss-of-License Program, the deferral of benefits in early disability retirement may or may not be made. This alternative is dependent upon the individual's insurances, savings, investments, etc.
- At all times, provided the provisions of the Social Security Act are complied with, the pilot may receive at age 50 or later, if disability occurs at a later date, the benefits to which he is entitled to under the Act.

The second amendment which is of interest to the pilot is that which reduces the eligibility age for wives. Formerly, the wife of an employee was eligible to receive a benefit equal to 50% of the husband's benefits provided both had attained age 65. The new provisions allow the wife to receive a reduced benefit at age 62. If the wife elects a benefit at 62, she will receive 75% of her full benefit. The percentage increases 8⅓% each year she waits before receiving the benefit after age 62 with full benefits payable at age 65. However, once the early benefit is elected and received it may not be increased except when the benefit is lost due to earnings received for a period of at least three months. Widows may now receive full benefits at age 62. Formerly widows could receive benefit at age 65.

Like the disability features of the Act, the pilot should relate this provision for the receipt of an early benefit because of his wife to the level income option of his retirement program.

ALPA's Structure . . .

(Continued from Page 7)

To further streamline the judicial process within the Association, appeals steps have been altered so that one appeal is provided. Whether the original hearing is held by the Local Executive Council or the Executive Committee, the appeal shall be to the Hearings and Appeals Board.

Status Of ALPA

During the course of our study, the Committee found that there was some

confusion on the part of some members as to what constituted ALPA. ALPA is a group of people, banded together as an organization, actively promoting the welfare of the members of the group. ALPA is the sum of the people belonging. ALPA is you and I. However, in order to promote the welfare of each member, it is necessary to have a business organization to act for us, individually or collectively, as the case warrants. That is where the confusion seemed to exist. There seemed to be a failure on the part of some members to realize that the business organization, which is called the "Home Office," is an agent of the members. These same members did not realize that the personnel at the Home Office work on problems assigned to them by the membership.

Study Of Home Office

Partly because of this feeling that the ALPA is the group in the Home Office instead of the average line flying member and because of the impossibility of separating the By-Laws from the day-to-day administration of the Association, the Committee spent considerable time studying the Home Office. They reviewed the operation of the administrators of our affairs. They studied the results from a business point of view and from the view point of how effective was the Home Office as a group engaged in providing service for the members.

The results of the study showed some departments to be understaffed. There was no proof that this was intentional. Rather, the reason for understaffing was due to the scarcity of manpower with the qualifications the Association needs. There is no other training ground for people to gain experience representing air line pilots. There is also the constant contest for good applicants with other industries. The Committee could not find where a lack of money or a lack of desire to spend money for good employees was causing the understaffing. The Committee agreed with the management of the Association that the act of paying a fabulous salary does not automatically guarantee a fabulous employee. We also agreed that money should not be a factor to prohibit the hiring of some person of known exceptional talents, if the person is available. The only restriction on the number of people that can be hired is the need for them. If the need exists and the person is available, he will be hired.

The Committee recommended the continuation of mechanization of those departments where mechanization is possible.

The Committee recommended expansion of the "on the job" training program now in effect.

Report's Conclusions

The final paragraphs of the report of the Organizational Structure Study Committee to the 14th Convention follow:

"It is our opinion that we have a healthy, properly managed Association. We believe that the objectives of the Association as set forth in the By-Laws are being complied with in all instances. We believe that the Air Line Pilots Association is well on the road toward being the outstanding example in the country of how a labor organization can serve the welfare of its members and the industry without sacrificing its principles in either field.

"In closing this report, the Organizational Structure Study Committee desires to point out that there is one soft spot in the Association structure that can allow the Association to fall flat on its face. No one person or group can correct this weakness alone. This weakness is the lack of interest on the part of a large segment of membership toward the day to day operation of ALPA, toward the goals of ALPA and their attainment, and toward the policies of ALPA and their implementation. This complete indifference by too many members, except when they are hurt individually, creates the climate necessary to allow the Association to degenerate into just another labor union, with the mediocrity that usually accompanies this type of retrogression of ideals and principles.

"What are you going to do about this attitude when you go home?"

Transport Plane . . .

(Continued from Page 4)

claimed to be caused by the mis-use of the engine cowl flaps. Since this accident occurred, in all probability all pilots will be trained to experience and identify the particular cowl flap shake and buffet characteristic *of that particular transport*—but what about the others?

What about the flight handling characteristics with an open inspection door, service door, cargo and entrance doors, emergency exits? During our flight evaluation programs with the manufacturers, which we appreciate so much, our small evaluation groups always benefit by working with the test pilots. We have many times remarked that all air line pilots would benefit by having conferences with manufacturers' test pilots, and demonstration flights covering the *unusual flight conditions.* Designers and flight test people should more thoroughly investigate the probability and make known the consequence of mis-use of the items we have previously mentioned.

Functional Reliability

Component testing plays a vital part in new transport design. By the record it is known that the malfunctioning of the smallest component can be as fatal as a major structural failure. As pilots we encourage thorough laboratory and actual service testing of components that go into the make-up of new transport airplanes. This is particularly required when departures from conventional design practices are in evidence. Components such as propellers have proven to be an item of real concern. A new type of construction of a propeller blade caused repeated fatal accidents over a period of years, prior to its replacement by a more proven blade design. We rely on the engineers of the manufacturers to do their utmost to insure reliable mechanisms and structures are incorporated in a new transport airplane when it is pronounced ready for scheduled air carrier operations. While we realize that service testing of airplane components and the entire airplane prior to their use in scheduled air carrier service may impose many problems, we are firm in our belief that the economics of adequate testing would balance out many times over, by the introduction of a new transport to the air traveling public that is a proven piece of equipment and will immediately accumulate a safe service record that will continue over a long period of time.

Structural integrity must now more than ever be assured throughout the service life of the airplane. While loss of life is the number one concern in regard to structural integrity of an airframe the economics involved in major airframe revisions after delivery cannot be ignored. An airplane in the air carrier shops is, of course, not productive and mechanic man hour costs and revenue loss soon amounts to great sums of money lost. Design Engineers should try to do their utmost to *sell* putting on a little more structural margin in certain areas and justify the airframe weight increase being more than compensated for by enabling greater utilization of equipment.

Fail safe design has long been the goal of everyone concerned and gains in "fail-safe" design considerations are

RETIREMENT CAN MEAN A NEW CAREER

By EDWARD S. BINDER
Director
Pilots Employment Agency

The airline pilot about to retire may be already planning his second career. Hunting and fishing might appeal to some, whereas others may be considering an entirely new field of business endeavor, such as farming, wholesaling, or even writing.

Notwithstanding the success of some who have switched to new fields after having acquired experience in one, statistics tell us that changing occupations late in professional life is risky business.

Why not examine the opportunities that exist in executive aviation before you make your decision. We invite you to drop in to see us next time you are near Teterboro or Burbank.

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in evidence. Anything that is mechanical should continue to be regarded as a thing that can fail. We rely upon the ingenuity of the designers to continue the "fail-safe" trend and provide the proper safety factor so that we pilots can, to a high degree, cope with equipment failures that can effect the safety of flight. Operational experience is such that planes and lives have been lost or by sheer luck no one was hurt due to detailed design failure. To list a few—fuel selector systems require attention; a modern twin-engine airliner lost all electrical power while on instrument flight; positive testing that fire detection and extinguishing systems are really functional is needed; with the new jet designs cabin supercharging can play an important part in flight safety, etc. We also stress that designers incorporate features in the assembly of the airplane so that the mechanic can install the various assemblies only one way—and that is the right way.

Human error possibility both on the ground and in the air are areas that from past operational experience require the ever-increasing attention of the designers.

On "human error" we consider it appropriate to quote the well-known Ben Howard, our best friend and severest critic in regard to a few paragraphs from the paper he presented at the 1953 ALPA Air Safety Forum, as follows:

> "I submit that any airplane model having a higher frequency of any given type of crash than any other model in the same category, is below par and the crashes are a result of design error, since par is demonstrated by the airplane with the lowest crash rate. I also submit that we are evading responsibility when we charge a crash to pilot error when the pilot is only guilty of doing what other pilots have already established as something to be expected of a qualified pilot.
>
> "It is up to the designers of the aircraft to devise a machine that can safely tolerate the circumstances to which it will be exposed. They must design its wings to handle the expected air loads and they should design its cockpit to tolerate safely the expected performance of the man who is to fly it.
>
> "Our failure to so design the cockpit is responsible for fifteen times as many crashes as result from structural failure, yet there is very little comparison in the engineering dignity we give the two subjects."

Much thought should be given to Mr. Howard's paragraphs, since we believe his thinking is more apropos now than ever before with the large airplanes now in service and "in making" carrying their great quantities of human cargo. We believe engineers and scientists working in cooperation with the *daily scheduled* air line pilot can make vast strides in improving airline *operational safety*. We are pleased to be in a position to say that this is a growing trend in the industry. We welcome all opportunities to offer our contributions.

In conclusion we quote from a Flight Safety Foundation bulletin article entitled, "Responsibility":

> "In a business now labeled 'safe' but which is always potentially very dangerous due to a man's lack of buoyancy in the air and which, therefore, is more aptly described as 'made safe,' safety is our prime concern. We must never lose our respect for the air and so treat it carelessly. A great privilege and a great responsibility has been accorded us—custodian of the lives we carry. And in the measures of responsibility, none equals that for lives."

(From an address presented at the SAE National Aeronautical Meeting, Los Angeles)

INSURANCE FOR PILOTS In All Its Forms

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Jet Acrobats

The 120th Fighter Interceptor Squadron's Commanding Officer, Maj. W. A. Coomer (see front cover), and its Operations Officer, Capt. J. T. Ferrier (above), are probably the only air line pilots in the nation, who fly in a jet acrobatic team.

As a civilian, Maj. Coomer is a First Pilot on United Air Lines' Mainliners, based in Denver. Capt. Ferrier is a co-pilot on DC-6's and DC-7's between Denver and New York—Washington. Both are veterans of World War II and the Korean campaign, and are members of ALPA Council No. 33, Denver.

The jet acrobatic team, known as "The Minute Men", has performed in shows in most of the larger cities of the nation. Ferrier flies the slot position in the four-men precision team, while Coomer is the solo performer of individual acrobatics.